

Z88 EPROM

August 1991

Vol.5 No.6

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The Z88 Users' Club Magazine

Club Addresses

All articles for **Z88 EPROM** and any membership matters (**except** Software Library) should be sent to:

**ROY WOODWARD
Z88 USERS' CLUB
68 WELLINGTON STREET
LONG EATON
NOTTINGHAM
NG10 4NG**

All requests for software from the Club Software Library, items for inclusion in the Library, and EPROMs for erasure should be sent to:

**IAN BRABY
THE SOFTWARE LIBRARY
Z88 USERS' CLUB
3/8 JENNER ROAD
GUILDFORD
SURREY
GU1 3PL**

Please note that the **Library** address is the one to use when sending for a list of Library programs - this list is **not** available from the main Club address. Be sure to enclose £1 plus a SAE for the list. Also note that this list now includes the CLI Library list.

CLIs for inclusion in the Software Library should be sent to:

**MICHAEL HEY
18 WOODSIDE ROAD
SANDIACRE
NOTTINGHAM
NG10 5GP**

ALWAYS include your Membership Number with any correspondence. This is not just to be awkward - now the Club is large it can be very time-consuming searching the database for a member's number. Your number is printed on the address label of each issue of **Z88 EPROM**. Please be sure to enclose a stamped-addressed envelope with anything needing a reply.

Editorial

By the time you read this, it will be less than two months until our next Workshop Day at Milton Keynes on Saturday 26th October. So far I have sold just 10 tickets. **Please, please** order your tickets now, so that I have a reasonable chance at planning the event more than a day or two in advance of it happening! As this copy date approached, I was in two minds whether to call the event off due to lack of support, but my instincts tell me that the small number of ticket sales is a reflection on the number of you on holiday etc. at this time of year. Please justify my faith by ordering your tickets **SOON**. If any of you still need convincing that the Workshop idea is a good one, you will find a short article about what will be happening on October 26th elsewhere in this issue, together with some photos of the last Workshop in June.

128k Machine!

News this month of a new addition to the Spares Service - you can now have your machine upgraded to 128k internal RAM! You simply send your machine in to the Club, and we remove the existing 32k RAM chip, and replace it with a 128k chip. This simple upgrade makes better use of slot 0, and gives you an extra 96k of RAM available to PipeDream and the Filer. There is a special introductory price of just £39.95 for the upgrade to 128k, and this includes return postage and VAT. See the advertisement elsewhere in this issue for this new service.

While on the hardware front, I have been able to obtain further supplies of the Z88 boards I had earlier this year. The boards have been removed from machines, but are fully tested and guaranteed for 3 months. Price is still £60 including delivery and VAT. Also available are the same boards already upgraded to 128k RAM in slot 0, price for these is £95 including post and VAT. These boards are ideal if you are having spontaneous resets or other hardware-related problems, as they are considerably cheaper than a new board, which is what CCL would fit if you sent the machine in for repair.

Running Off!

You may remember back in the April issue I told you of Steve Running, CCL's new Marketing Man. Well, true to his name, Steve has left the company after just 10 months, and moved on to help the Glasgow Development Agency. His replacement is called Alan Oxley, and so far I have had no contact with him, but expect to soon. I will of course report back on any developments. With Alan's arrival, I believe he makes the the fifth marketing manager CCL have had in as many years. Could this be why the Z88's market prescence is zilch, and any uniformity of marketing approach from CCL went out of the window long ago? Indeed, CCL's method of marketing seems to have turned the Z88 into an "underground" product, with potential customers positively struggling to find any information on the machine, let alone actually see one in a dealer showroom. Please, CCL, tell me I'm wrong, but you just seem to be wandering along in the computer business, with no real goals or plans. Surely the money must run out somewhere along the line?

A recent survey in Computer Trade Weekly, a computer trade paper, reckoned that just 6% of independant dealers were stocking the Z88. They were basically saying that the Z88 was dead. Let's hope Mr Oxley can work effectively and quickly to prove them wrong.

Newslines

And Now... RangerUniverse

As exclusively predicted in Z88 EPROM Vol 5 No 4, Ranger Computers have announced a new combination chip which uses the new 256k EPROM. RangerUniverse contains everything that was on the old RangerWorld chip (except Rakewell's SqueeZ'88) with the Computer Concepts Spellmaster spelling checker, for which Ranger hold the exclusive distribution rights.

The new EPROM is very aggresively priced - just £115 + postage + VAT (£138.06 inclusive).

The RangerUniverse contains Spellmaster; RangerLink; DiskFiler' Vision/L; Space; EP Fetch and PC Link. For more details on these applications see the Ranger ad elsewhere in this issue.

The decision to exclude SqueeZ'88 seems strange, but was apparently purely a commercial decision based on the fact that it is the only application in the package not owned by Ranger, and as such was costing a royalty fee for each copy sold. However, all is not lost if you want RangerUniverse and SqueeZ'88, for Rakewell, the authors of SqueeZ'88, sell this package for an extra £30 + VAT, ie. £145 + VAT.

What next I wonder? I would like to declare an interest in the name RangerGalaxy, so that I can milk a huge royalty from Ranger for its use in the next generation of chips! Seriously, if you want details of RangerUniverse, call Ranger on 0604 589200. For details of the RangerUniverse + SqueeZ'88 package, Rakewell are on 0296 630617.

New Z88 Case

Part two of Ranger Newslines for this month is details of a new leather carrying case for the Z88. You may remember that Ranger have always done a rather exclusive, and at £75, expensive, leather case for the Z88. The new product is priced at £30 + VAT, a price more within the reach of the average user. In some ways the new RangerCase goes some way to fill the gap left by the original CCL carrying case - like the much-mourned Cambridge product it too has a zip all the way round, carrying handles, and indispensable little pockets for EPROMs and batteries. Available in genuine leather, any colour as long as it's black!

New RangerLink and DiskFiler

To conclude this issue's Ranger Newslines Special (if only because Ranger appear to be the only people telling me what they are doing) we have new versions of these two popular Ranger packages, which offer increased speed of operation, various tiny bug fixes, and most important, use less memory on the Z88 when they run. This last feature will be the lifesaver if you are still trying to struggle on with 128k of RAM, and constantly find the software refusing to run due to lack of memory.

Diary Dates

The All Formats Computer Fairs are proliferating! The organisers have added more dates and more venues, and the good news is that the Club will be represented at all the exhibitions except those in Scotland. Although not finalised at the time of writing, it is hoped that a representative from CCL will appear at the Glasgow show, so at least the Z88 will be represented. The other very important date is the Club Workshop Day (plug, plug).

Saturday 14th September - All Formats at Birmingham. Venue: National Motorcycle Museum, J6 M42.

Sunday 22nd September - All Formats in Glasgow. Venue: City Hall, Candleriggs.

Sunday 6th October - All Formats in Bristol. Venue: The Brunel Centre, Bristol Old Station, next to Temple Meads.

Saturday 26th October - Club Workshop at Milton Keynes. Venue: Stantonbury Campus. Tickets £3.50 each from Club address on page 2.

Sunday 3rd November - All Formats at London. Venue: Royal Horticultural Hall, Westminster.

Sunday 10th November - All Formats at Birmingham. Venue: National Motorcycle Museum, J6 M42.

Entry to the All Formats Fairs is £4, and all Fairs run from 10am until 4pm.

Helpline

If you have a technical query, write to one of our Helpliners listed below. Please note that you should include a stamped addressed envelope or sufficient return postage for your reply.

CLI Files - Contact Michael Hey by post only at: 18 Woodside Road, Sandiacre, Nottingham. NG10 5GP

Z88 to Amstrad PCW Link - Please write in the first instance to: Mr A West, 16 Southway, Burgess Hill, Sussex. RH15 9ST.

zBASE, CLI and all Wordmongers products except TX and Comms software - Contact Jason Crook (ex of wordmongers) at 4 Salisbury Close, Princes Risborough, Bucks. HP17 0JF. Telephone 08444 7075. I will also write to order in zBASE.

zBASE - Help on commands and programming. I can accept info/programs on paper. EPROM, zTape cassettes or IBM disk. Contact Robin Jarvis, 27 Gloucester Road, Waterlooville, Hants. PO7 7BJ.

Z88 to Amstrad CPC Link - Contact Duncan W. Kennedy at 32 Otterston Grove, Dalgety Bay, Fife. KY11 5PA.

BASIC Programming - Contact Richard Russell at 59 Campbell Road, Gravesend, Kent. DA11 0JZ.

Interfacing Z88 to various hardware - Mac, BBC, PADs, also UNIX and C experience - Contact J.P. Knight Email JANET on jpknight@uk.ac.lut.sunu, or snail mail during term time to Room 66, Hazlerigg-Rutland Hall, Loughborough University of Technology, Ashby Road, Loughborough, Leics, LE11 3TZ.

PipeDream/Diary/General - Contact Keith Winsor at 13 Swansea Road, Reading, Berks. RG1 8EY. Or Telecom Gold 82:TLR1747.

Z88-PCW Link - Using C-Port program. Please contact David Prestage at 47 Knighton Road, Otford, Sevenoaks, Kent. TN14 5LD.

Anything Educational - Please contact Bob Shore, 8 Anchor Close, Hathern, Leics. LE12 5HP. Telephone 0509 842670.

Machine-code Programming - Please contact Richard Smith, 29 Sandhouse Crescent, Scunthorpe, South Humberside, DN16 1JF.

Printer Setups - Please contact David Stewart at 44 Margetts, Hemingford Grey, Huntingdon, Cambs. PE18 9EP. If you have any queries concerning general printer problems, eg. correct use of cables, how to connect up the printer, printer code language, understanding the information in the printer handbook, etc. please write to David. Notes on Printing, covering the above topics, are available by post from David. Price £3.00 for 30 A4 pages of detailed advice.

File Transfers - Free file transfers to/from most formats (excluding Amiga). 10 files max. and must be Z88 related - no commercial programs copied. Send disk and pre-formatted copy media, with Club Membership and return p&p to: Phasor Video, Elcot Lane, Marlborough, Wilts, SN8 2AZ. Tel: 0672 514451 (2.00-5.00pm Mon-Fri)

Club Workshop

Just a quick rundown of what is expected to be happening at the next Club Workshop, which will be held at Milton Keynes on Saturday 26th October 1991.

Always a popular attraction at the previous Workshops, Ian Braby will be there with the Software Library at your disposal. At the Workshop Ian will be more than happy to supply programs on your own EPROMs or PC disks, and chat with anyone who is having difficulty with any Library programs. If you have not yet sampled the delights of the Software Library, the Workshop is the ideal time to try.

We will have Dave Stewart, who runs the Helpline for printer problems, on hand to help sort out any queries regarding printers. Dave will also run a Workshop Group on printers. David Humphries will be at the Workshop demonstrating a new program for the Z88 called Sterling PFS - or Personal Finance System. This program will allow you to keep detailed home accounts on your Z88, and even looks after standing orders.

Among the experts running Workshop Groups will be Richard Russell, the author of the version of BBC BASIC used in the Z88. Richard will be on hand to tackle any BASIC-related problems you might have. Tony Kaye of Wordmongers, who is among those of us who were in with the Z88 right from the start, will be running Groups on his pet subjects of zBASE and Comms with the Z88.

Among those on hand for general Z88 advice will be Bob Shore of S&S Computer Advice, and Vic Gerhardi of Rakewell, one of the authors of the best Z88 book, Z88 Magic. For those of you who have advanced onto machine-code programming, both Dave Hampson of Ranger Computers, and Steve Marsh, who runs the Club Application Library, will be running groups on the intricacies of the internal Z88 workings.

Last but not least, Rob Macmillan of Colton Software will be on hand as ever, to cover PipeDream on the various machines supported, and representatives from CCL will be there too.

I aim to make the Workshop Groups many and varied, and they will certainly cover a whole range of abilities, ranging from general



Vic Gerhardi of Rakewell, who also wrote the brilliant book "Z88 Magic", leads a Workshop Group in the Library on File Transfer. Vic ran several groups at the last Workshop, all of which were very well attended!



This photo shows the large exhibition hall at the venue, which is surrounded by the balcony in the foreground - the two members here are obviously engrossed by a problem!

Thanks once again to Fred O'Hare for the photos.

groups for the absolute beginner to those on machine-code programming for the real expert.

Whatever your interest, come along and meet the 100 or so other Z88 users who, like you, have queries and problems and mutual answers.

Tickets for the Workshop cost £3.50 each, and are available from: Z88 Users' club, 68 Wellington Street, Long Eaton, Nottingham. NG10 4NG.

Members' Letters

R. Jordan (0882)
Middlesex

Dear Roy.

I thought I would write to you and pass on some information about a problem I've been experiencing whilst writing a program using zBASE.

The symptoms of the problem are that if you if you enter the zBASE command 'let x=val("0.05")', to convert the string "0.05" in to a number, then x will actually contain the value '3'.

Another symptom is to enter the zBASE command 'let x=(2.1-int(2.1))*10', to obtain the mantissa of 2.1 as a whole number, ie '1', then x will have the value '79.9999996'!

I have figured out why both these problems occur after some experimentation and talking to the kind people at Wordmongers.

They are both symptoms of the fact that zBASE uses inbuilt Z88 routines for performing mathematical type functions, and the Z88 stores small numbers, such as 0.05, in the scientific notation, ie 5E-2.

As shown above, if you try to perform the function VAL on the value "0.05" in zBASE, then this is firstly converted into '5E-2', which is then evaluated as the mathematical expression '5-2', ignoring the 'E', and gives the final answer of '3'.

This problem only occurs when you are using numbers smaller than 0.1 as only then are they stored in the scientific notation.

The reason the second problem occurs is because the Z88 is slightly inaccurate and '2.1-INT(2.1)' equates to 0.0999999996 or 9.99999996E-2, which actually becomes 7.99999996, even more inaccurate!

As you can imagine I was pretty 'gobsmacked' when I discovered this bug, but I quickly dragged myself away from the gin and set about writing some zBASE routines to overcome these problems. The answer was, as is often the case, to keep the expressions as simple as possible.

The application I am writing involves figuring out the difference between two times, ie 1.20 would be twenty minutes past one, and 2.40 would be two forty. In order to get the time difference both values first have to be converted to a number of minutes, ie $(2*60)+40=160$, and subtracted from each. The resulting number of minutes must then be converted in to a string in the format "hh.mm" for display purposes.

This first routine, TMIN.PRG, converts a time value, such as '10.09' held in 't', in to a number of minutes in 'tmin':-

```
if t<0.1
  let tmin=int(t*100+0.1)
else
  let tb=int(t)
  let ta=t-tb
  let ta=int(ta*100+0.1)
  let tmin=tb*60+ta
endif
release tb,ta
return
```

The second routine, MTIM.PRG, converts a number of minutes, such as '135', held in 'mtim', into a string time value in the format "hh.mm", held in 'mtim\$'.

```
if mtim<60
  let mtb=0
  let mta=mtim
else
  let mt=mtim/60
  let mtb=int(mt)
  let mta=mtim-(mtb*60)
endif
```

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```
let mta=100+mta
let mtb=100+mtb
let mtim$=substr(''&mtb'',2,2)+''. ''
let mtim$=mtim$+substr(''&mta'',2,2)
release mta,mtb,mt
return
```

In the case where I want to convert a string time value in the format "hh.mm", held in 'STIM\$', in to a number of minutes then I simply do the following:-

```
let t=&STIM$
do tmin.prg
```

The variable 'tmin' will then contain the correct value.

The final routine, TTIM.PRG, will convert a time value, such as '14.03', held in 't', directly in to a string time value held in 'ttim\$'.

```
if t<0.1
  let tsb=0
  let tsa=int(t*100+0.1)
else
  let tsb=int(t)
  let tsa=t-tsb
  let tsa=int(tsa*100+0.1)
endif
let tsa=100+tsa
let tsb=100+tsb
let ttim$=substr(''&tsb'',2,2)+''. ''
let ttim$=ttim$+substr(''&tsa'',2,2)
release tsa,tsb
return
```

I have found that these routines work well in practice, you can obviously try them yourself but be careful about trying to combine any of the lines in to a single expression as this may make it too complicated and you will force the bug to appear.

Steve Marsh (0770)
Little Stukeley

Dear Roy,

Programmers' Group: I think that Richard Boam's idea is a good one - perhaps a newsletter or local discussion groups might be of interest to some? I think that a dedicated programmers' area in Z88 might be too specialised for Z88 Eprom, although as a medium for publishing Z88'ers "wish lists" it is ideal. What do other users think?

Batteries: I have used NiCads in my Z88 for over three years now, only changing them once the screen breaks up. There is no hurry to change the batteries once this happens, I have waited for over 30 mins before changing them with no ill effects. In this way, I get around 5-6 hours use out of a set of NiCads. It is necessary to carry a spare set of fully charged NiCads though.

The only problem I have encountered is when I have left the Z88 unused for long periods (more than 2 weeks) when a set of NiCads may not have enough power to last the duration. Even then, an apparently 'dead' Z88 often fires up OK on inserting new batteries.

Note: If you ever find a set of batteries has gone flat in a Z88, remove any ROM/EPROM in slot 3. If you don't, the Z88 may corrupt it! This is only a problem with slot 3 as this is the only one which has the programming lines enabled.

Queries, Hints & Tips

Nicholas Morris (1493)

I have come across an apparent bug which I have not seen described. Merging PipeDream documents at a specified slot adds ten columns, at least it does in my version 3.0. If you have enlarged the default page width and/or adjusted the map size, you may not notice this word-processing, as the telltale dots extending to the right of the 'F' may be hidden (but you will find you can tab across to column 'P' after merging.) However, a header or footer that is centre-aligned then appears on the map (and prints) centred across the sixteen columns, in other words on the far right (if at all) of your page.

One way around this is to save the document immediately after merging, specifying range of columns A through F. Delete the sixteen column version you were working on (<>BNEW) and reload the file you just saved. You should then be back with a six-column merged document, and your header or footer correctly centred. As you would expect, a left-aligned header or footer prints normally in an 'untreated' (sixteen column) merged document; where a right-aligned header or footer prints depends on your printer. The centre and right header/footer alignment options will also print correctly from an untreated merged document if printed by the 'marked block' method, and in such a document the text alignment options (<>LAC etc) work as normal relative to your margin, not across the sixteen columns.

Another circumstance when your footer may not appear as expected is when your document is double-spaced. If your text extends to a page break, you must set the bottom margin to '3'. If it is set to '2', the footer will disappear as you start the last line.

Portfolio with zBASE

by Tony Kaye (Wordmongers)

Having read Prof. Shackel's article in Vol 5 No 4, I thought it might be interesting to see if a similar facility could be written in zBASE. Well of course it can be done, but the question has to be whether it is worth the effort. As all good analysts would say, "The answer will depend on the need for the information and the use to which it will be put." If a simple current valuation of a small portfolio is required, then Pipedream must be the correct route. However, if the portfolio is not small, or if historic data is required for some purpose, zBASE offers some marked advantages. The advantages relate to the collection of related data and the opportunity to analyse past data over an extended period. In this particular example, avoiding the restriction of one line per share is also a benefit in that any set of historic data can be displayed all over the screen so that more than just the last 6 or 7 price changes can be seen.

The suggested system described below is an outline and is designed to point zBASE users to a solution.

Investment valuation database:

```

SHARES.DEF
SHNAME$,C,20
BDATE$,C,8
BPRICE,N
BNUM,N
BCOST,N
LDATE$,C,8
LPRICE,N
LVAL,N
PROFIT,N
SHREF$,C,6

```

The data entry routine for this program is a standard program much like the program written during the workshop session at Milton Keynes or as published previously for a Phone Book. The twist is in the use of a relational second database file for holding weekly data.

The link to the second database is via the SHREF field. A possible structure for the second file is as follows:

```

OLDVALS.DEF
RDATE$,C,8
RPRICE,N
RVAL,N
RPROFIT,N
SHREF$,C,6

```

Assuming that a simple data entry routine has been written for entering data to SHARES, a specific sub-routine will be needed when entering a new price for the investment. The outline for this routine, or pseudo-code as it has been labelled by dBASE users, might look like this: The general idea is that as a new price is entered into the SHARES database, the old data is transferred to the OLDVAL file.

Open SHARES.DBF in area 1, indexed on SHNAME

Open OLDVAL.DBF in area 2, indexed on SHREF

Find record to be updated and display

If updating price, do the following

 get newprice of investment

 store newprice to memory variable newpr

 calculate new valuation

```
calculate new valuation
calculate new profit percent
display new valuation
display new profit percent
store new value to newval
store current date to newdate$
get date of newprice, defaulting to newdate$
confirm these new data items
IF confirmed
  select the oldvals database, select 2
  append blank
  store values from area 1, SHARES to the OLDVALS
  database in area 2.
  store 1:ldate$ to 2:rdate$
  store 1:lprice to 2:rprice
  store 1:lval to 2:rval
  store 1:lprofit to 2:rprofit
  store 1:shref$ to 2:shref$
  now put new data into current database
  store newdate$ to 1:ldate$
  store newprice to 1:lprice
  store newval to 1:lval
  store newprof to 1:lprofit
endif
endif
```

With the above sub-routine programmed into the data entry routine, the OLDVAL database can then be used for historic price tracking. In the world of investment CHARTISTS, such a database would be the first step towards investment prediction. It should also be noted that in New York, computer analysis trading has been blamed, more than once, for the large and sudden swings in prices, prompted by chartist type trading decisions triggered automatically by computers.

May your investments be fruitful.

NEW!

The 128k Z88

We can now offer an upgrade for your Z88, replacing the internal 32k RAM chip with a 128k device, giving you an extra 96k of RAM without using any more slots.

This upgrade makes better use of the internal slot 0, and could well free up one of the external slots if you use one or more of these for RAM expansion.

Send your Z88, well packed (preferably in its original plastic box), with cheque/P.O. for just £39.95. This special introductory price includes return post and VAT.

IMPORTANT NOTES: Do not send your Z88 if it has any sort of fault - all machines will be tested before upgrading, and if any fault is found the machine will be returned immediately with a refund less £5.00 to cover postage costs.

The 128k RAM in slot 0 is fully available to PipeDream and the Filer. The upgraded machine does not behave like an Expanded Machine (ie. one with >128k in slot 1) in that you do not get the 40k BASIC etc. unless you also have >128k in slot 1. See Developers Notes for more details on Expanded Machine.

**Z88 Users' Club, 68 Wellington Street,
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- Space - The only application that displays the space remaining in each Z88 RAM and EPROM slot
- EP Fetch - allows filer-like access to EPROM files

To order your RangerUniverse, simply send £138.06 (Including UK postage and VAT) or quote your Visa or Access number with expiry date and card address.

Other Products:

Ranger stock the full range of Z88 hardware and software - please enquire for details and the latest prices. Some new items are:

**256K
EPROM
1M RAM**

At last! Made on the same line as CCL's own packs, this is quality product at an affordable price - 256K EPROM only £50 + VAT (Total £61.69 including VAT & UK postage) 1M RAM only £200 + VAT (Total £237.94 including VAT & UK postage)

Leather Carrying Case

We have a new design of soft leather carrying case, custom made for Z88 in genuine black leather. The case zips securely around the Z88, has a pocket for EPROM packs and spare batteries and, most important of all, carrying handles!

The new case is available from stock at £30.00 + VAT (£38.19 including VAT and UK postage)

New Versions

New versions of the Diskfiler and RangerLink software are now released. The new versions use significantly less Z88 memory, have improved speed and other enhancements. Existing users can obtain the new versions by sending £26.44 (£20 + VAT + postage) together with their old EPROM and disk. The new versions are already incorporated in RangerUniverse.

Please note that all prices exclude VAT. We accept official orders from qualifying UK companies and government organisations. All others, cheque or P.O. with order please. Alternatively, you can order by telephone quoting either Visa or Access (Mastercard) number. Next day delivery available on all items, subject to stock, £11.00 in most of UK. Please call for freight costs to Scotland, offshore or overseas.

Ranger Computers Ltd
Ranger House
2 Meeting Lane, Duston
Northampton NN5 6JG

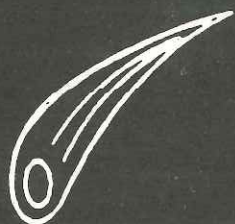


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Michael Hey's Spot

This month I am going to reply to questions raised by E. E. Hess, a personage who often queries the advice I ladle out so freely in **Z88 Eprom** month by month. Elaine (that's her first name) has identified several points which merit further attention, so this month I am going to write on a selection of Miss Elaine E. Hess' subjects.

MISCELLANEOUS SUBJECTS

Last month I promised that I would explain how to launch applications and open files by "double-clicking" them. It is not possible to do this literally on the Z88, (by pressing [ENTER] twice) but it is possible to instruct the CLI to do something similar for you. For example, last month I referred to my address list, which is one of the files I consult most regularly. I am usually working on something in PipeDream which I do not want to have to bother saving before loading the address list, so the addresses will have to go into a new instantiation of PipeDream. Here is a first effort:-

```
#I~L~D~E|FLaddresses~E
```

This enters the Index, moves the cursor left, and then one line down and presses the ENTER key before loading the address file. However it assumes several things that may or may not be true. The most obvious cause of error would be if the selection bar was already located in the left hand column (the one labelled "Applications"). If this is the case the ~L instruction is ignored, and the selection bar moves down one line. If it is over Diary then all will be well; if not then the wrong application will be selected and all will be unwell. To get round this you may use the following sequence of instructions:-

```
#I|CARD| [~D~E|FLaddresses~E
```

....and this does work provided that the top of the applications list is the Diary. If the Diary is not at the top then it will crash too. I do not find this a terrible problem; I rarely use the lower depths of the Applications list, and it is merely a matter of restoring "Diary" to to its rightful position if it gets scrolled off the top of the list.

A brief diversion....

There is a way of ensuring that the Diary does appear at the top of the list. Just for interest here it is:-

```
#I|CARD|[ ~U~D|CARD|[ ~U~D|CARD|[ ~U~D|CARD|[  
~U~D|CARD|[ ~U~D|CARD|[ ~U~D|CARD|[ ~U~D|CARD|[
```

If you have further applications on the list (e.g. on a couple of Super-Duper-Chips) you will require extra lines in your program. How does it work? Simply (!) by moving the selector bar to the top of the column, and then up and down one line. This operates like a ratchet and scrolls the list by one line each time until Diary comes to the top of the list. Once there it stays there because the selection bar flips to the bottom of the list instead of scrolling.

This program, or one similar, appeared in Personal Computer World a couple of years ago, sent in by our own Dr R. Marsh, if I recall correctly. However it takes 30 seconds to run, which defeats the object of the exercise, which is a quick way of loading my address list! Here is another good idea for the designers of the Z88-Mark-2: the Index should follow the example of PipeDream and the Diary and use <>UP to jump to the top of the Applications list.

Further Features for Application Launching

There are further refinements possible with our application launching CLI. For example: when I am consulting my address list I am constantly bothered because the post-codes fall off the right hand edge of the screen. Really I need to exploit the full screen width, to avoid all that unnecessary scrolling about. So here is the revised version of the program above:-

```
#I|CARD|[~D~E|FLaddresses~E #S~R~R~D~DN~E
```

This switches the PipeDream map off after loading the address list. Clever, eh? Unfortunately you have to restore the map yourself when you have finished with the addresses. This sort of ploy can be used to turn off the irritating bleeps which accompany some BASIC programs before running them, though you must be careful to turn Sound back on again, especially if you are expecting the Alarm to go off later. If you are interested in automating the routine operations of your Z88 this sort of messing about will probably appeal to you.

More about Aliases

My writing last month about "aliases" provoked some mail from (mostly unimpressed) Club members. My thanks to the chap (a genuine person, unlike the fictional Miss Hess above) who took the trouble to explain about using // to find a file in any subdirectory (e.g. ":RAM.*//current.acc") to find the file ":RAM.1/DOMESTIC/FINANCE/BANKS/current.acc". This is indeed what I have been doing before I started using the alias idea.

The problem is that I have another file with the same name in subdirectory /WORK/TEA-FUND/ and so loading :RAM.*//current.acc loads the wrong one. By making aliases for the one "dosh" and the other "slosh" my Z88 never gets them confused. The whole idea of directories is that you can use the same file name in several places. If I were treasurer of the Long Eaton Football Team Society I could have another "current.acc" file in the subdirectory called LEFTSOC. And so on.... Aliasing also gives you the opportunity to give files memorable names. I mentioned the example of keeping an alias of Z028 called "EF" named after the Filer <>EF command, because I can never remember what the original name of the program was. I have re-named it, but then I forgot what Z028 was, and ended up with two copies of the program in RAM (one called EF and the other called Z028). Do you get my drift? Anyway, I think it is a good idea, even if some of you do not.

CLI programs can also be given aliases. These use the CLI .* command. For example I keep an alias of one of my ingenious CLIs in :RAM.0 under the name "clever.cli". This is very short:-
 .*:RAM.1/ingenious.cli which runs my ingenious CLI for me.

Whilst on the subject of things in different :RAM devices, here is an old trick (old to me - it is possibly new to you). I have files stored in :RAM.0, :RAM.1 and :RAM.2, and I get fed up of continually using the <>SV command to slip back and forth between them. So I keep a couple of little CLI routines handy for swapping back and forth. For example:- |SV|D:RAM.0~E which I call by the name "0", and keep in :RAM.1 and :RAM.2. To get straight to :RAM.0 I merely type <>EX 0 [ENTER] and presto! there I am!

Well, time has caught up with me again, so that is all for this month. Next month.... Wait and see.

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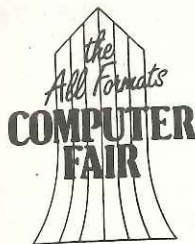
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More About Batteries

by Jack Lawrie(4635)

Whilst the life of the battery in the Z88 is not so short as many fear (if you agree with my conclusions in the May issue) , there will come a time when the LOW BATT warning will appear within a few seconds of switching on.

If the cells are removed at this point they can be re-charged. Before some of you turn over the page, let me tell you that I was charging dry batteries in 1940 and have been doing it ever since! During the war, myself and probably many hundreds of apprentice electricians were keeping torch and bicycle lamps going for many months after they were supposedly 'dead' and these batteries were poor specimens when compared to today's alkaline types. All we used was a D.C. supply and a small lamp in series. Sometimes we 'cheated' by drilling a hole in the top and forcing some water in!

Since the advent of rechargeable cells and chargers I have kept alkaline cells going for 3 and 4 years by putting them on charge from time to time. How long to charge? Until the voltage per cell reaches 1.7 to 1.8 on charge, anything from an hour upwards. It will soon fall to about 1.5 when taken off.

I never thought there was any risk involved in doing this but I wasn't too keen to recommend it to anyone else, just in case... even though the method had been confirmed more than once in articles in the popular hobby journals. The latest appears in the September issue of "Everyday Electronics". Mr Alan Tong adds some sophistication to the charging circuit in that he uses low voltage **A.C.**, giving 'periodic current reversal' to minimise distortion and to prevent leakage. I've never had trouble of this nature that I am aware of but one should not ignore possibilities. He makes a very important and comforting point in saying that if a cell is going to leak it will do so on charge and not in service.

His recommended currents for AA cells are 50mA forward (normal charger current) and 10mA reverse. The only requirements are a small 240/4.5v transformer and a few cheap resistors, diodes and cell holders.

If you are interested in this subject but you are not able to see the article referred to please look me up at M.K. in October and I'll be happy to show it to you.

Rechargeables: - did you know that rechargeable cells, as a rough guide, lose 40% of their capacity in 40 days at room temperature but only 10% at 0 deg C? Always keep them in the bottom of the refrigerator (I keep all my batteries there) - wrap them or otherwise prevent them from short-circuiting.

Another tip: If you use re-chargeables and you want your spare set to be ready for immediate use, put a simple mod. on your charger so that, after charging, you can put them on to a constant trickle charge of 5mA. Mine needed a 1K resistor in series via a change-over-switch.

Postscript

- about Mortgages.

I am grateful to Mr D.Stewart for his piece on page 5.5.14. I didn't know one could use a conditional IF,THEN,ELSE on Pipedream. With regard to his formula - he should have said that this was for an *ENDOWMENT* mortgage (though in mentioning endowment payments it was perhaps implied).

The formula for a repayment mortgage is quite complicated. It required 9 columns on my spreadsheet to do the calculation in easy stages. (All but the last one are hidden of course).

- about M.Hey

I think he intended his piece in the June issue to be published in April. It was a leg-pull wasn't it Michael? an April rose. I'm sure it is very tempting to ask oneself "how can I avoid all this typing to get at a file buried deep in the Filer?" Sure, you can just type "heyyou" and the CLI will fetch it, but why not file it under "heyyou" in the first place? Or is it a case of a CLI looking for an application rather than the other way around.

Only joking Michael, keep up the good work!

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Dateline September 1991

This month is User Club promotion month. zBASE is the target so if you have been thinking about it, here is your opportunity to get zBASE with a full copy of EAzymoney on disk. The free disk is an excellent introduction into what is possible with zBASE and provides many hints and tips.

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Tony

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Library Update

by Ian Braby

This month, some more upgraded programs, together with another batch of new ones.

Those who have already purchased a new copy of the Library List and who are sharp-eyed, will have noted that I forgot to announce two program updates last month. They were two programs from Jack Lawrie (4635); **Z139** - MORTGAGE which now is more sophisticated and comes complete with documentation and **Z140** - ANTS which now sports a UDG! Jack has also provided me with yet two more programs for the Library.

The other update for the month is Salvador Merino's FORTH master-work, now V2.01 and minus a few bugs which he had tracked down. Salvador is offering to write some programs for the Library in Forth; is anyone interested?

Updates:

- Z109** FORTH V2.01 by Salvador Merino (2268). A fully featured Forth interpreter, with "metacompiler", which runs under BASIC and includes a Z80 assembler and demonstration calculator. *Requires minimum 128K expansion.* 64.5K
- Z139** MORTGAGE by Jack Lawrie (4635); an accurate variable mortgage interest calculator. 4K
A=documentation
B=program
- Z140** ANTS by Jack Lawrie; a simple game in BASIC. 1K

New Programs:

- Z150** EDITOR by Jack Lawrie. Based on Cambridge's PROCED() procedure, a line editor suite for BASIC. 4K
- Z151-152 Two more spreadsheets by Steve Edwards (4794).**
- Z151** CFF; Cash Flow Forecast spreadsheets, there being both a simple and more complex version. 11K

A=documentation
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Z152 INVEST; a very detailed investment portfolio manager. 34K

A=documentation
B=spreadsheet

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